

about being tired. Absenteeism was unknown; the working day any or all hours of the twenty-four, with a seven-day week. Some of our war industry employees might take a lesson from these boys.

The hospital was set up within easy bombing range of the Japanese base at Bougainville, and our patients were brought in by ambulance plane, transport and hospital ship. Because we had to depend largely on corpsmen to give the anesthetics, my district medical officer directed me to organize a pattern of anesthesia suitable to our base hospital, the advanced dressing stations on Guadalcanal and the operating rooms of the transports. One system was used to facilitate teaching, because today a man might be at the base and tomorrow at a field hospital. As a result, anesthesia was uniform over the entire area.

Gas—nitrous oxide, ethylene, helium or cyclopropane—we did not have any provisions for getting cylinders either from Australia or the States. We did have a machine which the supply officers assured me was a Heidbrink, so that all of the spare parts from my own machine were brought along. When it was unpacked it was found to be a McKesson of the type probably used at Gettysburg.

Ether was frowned on because it is inflammable, and nothing of the nature was permitted. In fact, all paint, linoleum, and such accessories, were disposed of, due to the hazard of fire from a shell or bomb explosion.

Chloroform, yes; but when we unpacked it, it turned out to be a Barred Parker solution.

All of which simmers down to what could be used, namely—the three types of anesthesia—spinal, local, and intravenous, with various combinations of each. By going through all of the surgical supplies we found some Pilling silver continuous spinal needles, but no one-way syringes or mattresses for same. The American sailor is a resourceful individual, so when we told the mechanics in the gear locker what was wanted, they rigged up a one-way syringe by means of a ball-bearing taken from a junked plane and a pad made from three narrow mattresses, covered with canvas and a notch cut in the side. Crude, but extremely serviceable, and from these models many others were made.

Pentothal sodium was easier—we simply started intravenous glucose or saline, and added the pentothal in 5 per cent solution until the desired depth of anesthesia was obtained. Many of the patients were in shock; thus two purposes were served. The only disagreeable feature is that all litter bearers are equipped with morphine surettes and think nothing of giving a grain or more if it was felt the patient needed it. Often-times only 2 or 3 c.c. of the 5 per cent solution were needed after such a heavy dosage of morphine.

A bombing or shelling might be going on at the same time as surgery; so, to prevent the needle being jarred out of the vein, we devised a canvas sleeve into which the patient's arm was

placed, and an opening through which the syringe and needle were secured. On numerous occasions it was impossible to find a vein due to the exsanguinated condition of the patient. In these cases, we injected the glucose, plasma and whole blood directly into the corpus cavernosum of the penis. It's surprising how few sloughs we got.

Local anesthesia was used whenever possible.

All patients had been liberally subjected to sulfanilamide in dosages far above those used in the States. It is my understanding that some experimental work is now being done on the hazards of novocaine and pentothal in the presence of this drug. If this is true, we did not recognize it.

Many had been given atabrine and quinine prophylactically for malaria. It is doubtful if these influenced the anesthetic in any way.

Two anesthetists were assigned to each patient—one to administer the anesthetic, and the other to assist and write up the surgical procedure as the surgeon dictated while performing the operation. In case the patient was evacuated immediately following surgery, a complete record went with him.

Several times we were called to give anesthetics to wounded Japanese. Experience quickly taught us not to entrust this to any of our Marine corpsmen.

It is our hope that, as the war progresses, better methods will be available, because to the wounded soldier, sailor or marine, relief from pain is uppermost in his mind.

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AN OUTBREAK OF SHIGELLA NEWCASTLE DYSENTERY*

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THE prompt recognition and the institution of appropriate measures for the control of bacillary dysentery, as for other infectious diseases, are becoming more essential during wartime because of the inevitable crowding of troops and civilians in areas where modern sanitation may at least temporarily be lacking.

The relatively recent use of more selective bacteriological media has increased the laboratory diagnoses of bacillary dysentery. Of greater importance to the military and public health is the increasing awareness among medical officers and civilian physicians that outbreaks of "mild diarrhea," "gastro-intestinal upsets," and "food poisoning" may truly have as a common etiologic agent a species of the *Shigella* genus of bacteria.

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This article has been released for publication by the Review Branch, War Department Bureau of Public Relations. The opinions and views set forth in this article are those of the writers and are not to be considered as reflecting the policies of the War Department, or the military service at large.

That only the severer cases of bacillary dysentery have gross blood and mucus in the stools has been recognized by authorities.¹ Probably not more than 2 per cent of bacillary dysenteries occurring in our troops are recorded as bacillary dysentery.¹ The others, because of mildness of the clinical picture or unavailability of an adequate bacteriology laboratory in the field, have been termed "enterocolitis, acute" or "diarrhea, acute, mild, cause undetermined."

A relatively small outbreak of mild bacillary dysentery occurred among troops bivouacked on a Southern California desert area during the late summer of 1943. The cases appeared sporadically at first, not explosively as is characteristic of food poisoning. The hospital admission rate reached its peak seven days following the appearance of the first case, and abruptly fell thereafter coincident with and presumably because of the improvement in those sanitary measures long recognized by the army and public health authorities as essential for the control of enteric diseases.

Between the 20th and the 24th of September, 1943, bacteriological examination was made on the 78 patients then hospitalized. A single rectal swab taken of each patient was used to streak SS or desoxycholate agar plates and to inoculate a tube of tetrathionate broth. The tetrathionate broth tubes were used after 18 hours incubation to streak the selective media in cases where no suspected colonies were obtained by the initial plating. A single suspected colony in each case was inoculated in Russel's double sugar and transported to a central laboratory where identification was made by the usual sugar fermentations and by agglutination with immune sera.

Thirty-four positive cultures were identified as *Shigella newcastle* (Flexner, VI), an organism not previously reported in this area.² *Shigella sonne* was found in two cases, and a single infection with *Salmonella schotmulleri* was found.

While *Shigella newcastle* has been known to produce as virulent a disease as commoner *Shigella* organisms, the majority of the cases in the current outbreak were classified as "mild," recovering uneventfully without specific treatment within one to four days. No gross blood nor mucus was observed in the stool of any patient. An inflammatory exudate, however, was seen microscopically in all cases examined.

The hidden hazard of a clinically mild outbreak of bacillary dysentery should not be overlooked. Failure to determine promptly the true etiology, with the consequent failure to isolate patients, will result in undue contamination of latrines, of soil, food and water with pathogenic organisms which are as contagious as any of the *Shigella* group. Thus will result a wider spread epidemic with more men infected, though less severely, than in those epidemics of severer, "classical," dysentery infections.

CONCLUSION

An epidemic of mild, bacillary dysentery, due principally to *Shigella newcastle* (Flexner VI),

and its prompt control by correction of sanitary defects, illustrates the necessity for immediate correct laboratory diagnosis in any outbreak of enteric disease, regardless of the clinical severity or whether gross blood or mucus is present in the stool.

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DERMATITIS OF THE FEET AND HANDS DUE TO RUBBER

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EVERY physician is familiar with contact dermatitis of the feet due to sensitivity to leather and stocking dyes and stocking finishers.¹ That dermatitis of the feet may be due to a rubber sensitivity is a little known fact and is of great practical importance. I have been unable to find any reference to rubber dermatitis of the feet in the literature, and I have found that most of my dermatologic colleagues also are unfamiliar with it.

Rubber dermatitis of the feet most often affects women, as rubber is used extensively in the manufacture of women's shoes. Rubber cement is used for basting various layers of the shoes during the sewing process, and for fastening down the sock liner to the inner sole. In addition, an elastic rubber fabric is used frequently as an inner lining of the uppers of suede shoes to give a smoother and snugger fit. Rubber dermatitis of the feet is less commonly seen in men, as their shoes are built more sturdily and the sock liner is heavier.

Signs.—The dermatitis may be manifested by erythema, edema, vesiculation, weeping and crusting. It may involve any part of the foot in contact with the rubber fabric or rubber cement. However, it most frequently appears first on the toes, as the sock liner at the toe of the shoe often becomes loosened and the lining of the box of the toe is worn through early. The sides of the heels are also early sites of the dermatitis as the lining of the counter is easily worn through.

Diagnosis.—Rubber dermatitis of the feet should be suspected when the patient has had a previous dermatitis from rubber girdles, dress shields and unprotected garters. Therefore, a careful history must be taken. However, I have attended women with rubber dermatitis of the feet who did not wear dress shields or girdles. There may be confusion with acute dermatophytosis of the feet, especially if the patient develops a vesicular eruption of the hands. However, as Baer² has pointed out, "it is not generally recognized that contact-type eczematous eruptions on the feet—of *nonfungous* etiology—in some cases